Claims

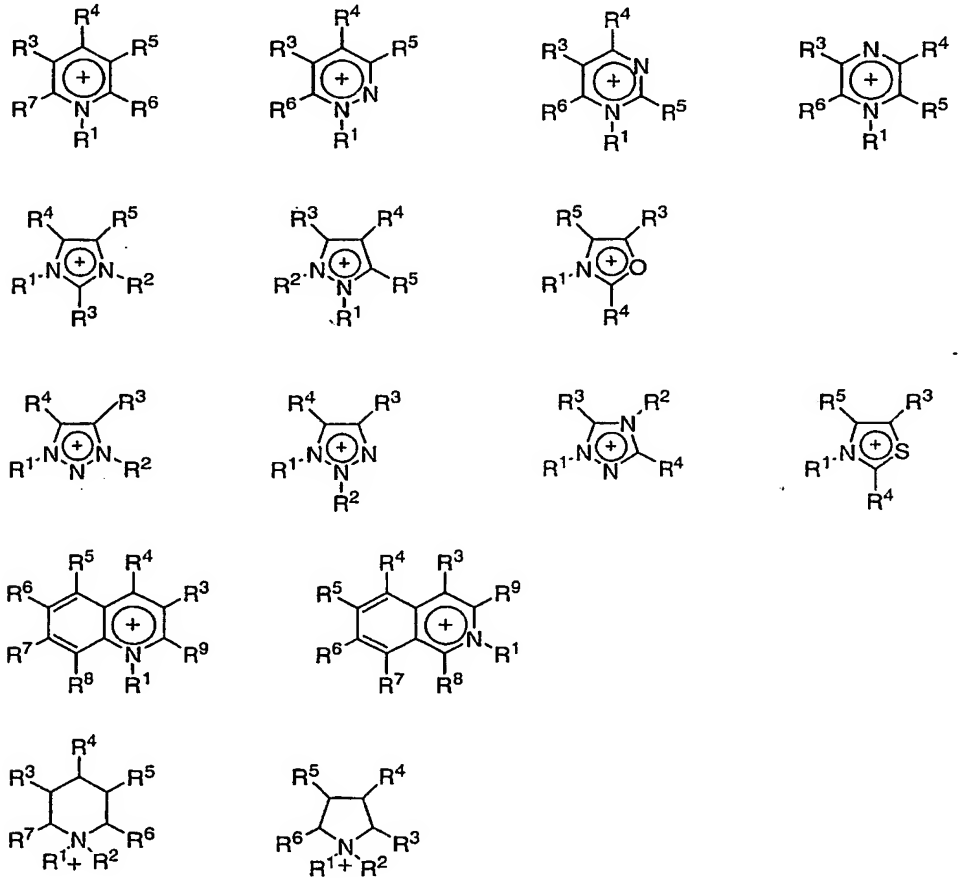
1. A method for preparing an organic starch ester comprising mixing a starch material with an ionic liquid solvent to dissolve the starch, and then treating the dissolved starch with an organic esterifying agent to form an organic starch ester, and subsequently separating the organic starch ester from the solution.

2. The method according to claim 1 wherein microwave irradiation is applied to assist in dissolution and esterification.

3. The method according to claim 1 or 2 wherein pressure is applied to assist in dissolution and esterification.

4. The method according to claim 1 wherein the ionic liquid solvent is molten at a temperature of below 200°C.

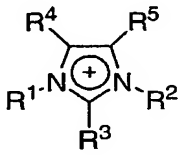
5. The method according to claim 1 wherein the cation of the liquid solvent is selected from the group consisting of



wherein R^1 and R^2 are independently a C_1-C_6 alkyl or C_2-C_6 alkoxyalkyl group, and R^3, R^4, R^5, R^6, R^7, R^8 and R^9 are independently hydrogen, a C_1-C_6 alkyl, C_2-C_6 alkoxyalkyl or C_1-C_6 alkoxy group, and

wherein the anion of the ionic liquid solvent is halogen, pseudohalogen or C_1-C_6 carboxylate.

6. The method according to claim 5 wherein said cation comprises



wherein R^3-R^5 are each hydrogen and R^1 and R^2 are the same or different and represent C_1-C_6 alkyl, and said anion is halogen, preferably chloride.

7. The method according to claim 1 wherein the starch material is native starch or hydrolyzed starch.

8. The method according to claim 1 wherein the organic starch ester is separated from the solution by adding a non-solvent for the organic starch ester to precipitate the organic starch ester.

9. The method according to claim 8 wherein said non-solvent is an alcohol, a ketone, acetonitrile, a polyglycol, an ether or water.

10. The method according to claim 1 wherein the organic starch ester is separated by extraction with a non-solvent for the ionic liquid solvent.

11. The method according to claim 1 wherein the organic esterifying agent is a C_1-C_{11}, preferabey a C_1-C_6 carboxylic acid or a reactive derivative thereof.

12. The method according to claim 11 wherein the C_1-C_6 carboxylic acid or a reactive derivative thereof is formic acid, acetic acid, propanoic acid, butanoic acid, acetic anhydride, propanoic anhydride or butanoic anhydride.